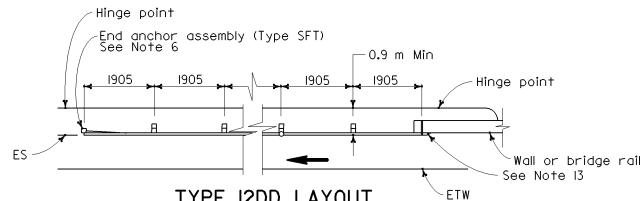


### TYPE 12CC LAYOUT

(GUARD RAILING INSTALLATION AT STRUCTURE DEPARTURE WITH A BURIED END ANCHOR TREATMENT AT TRAILING END OF RAILING)  
See Notes 10 and 11



### TYPE 12DD LAYOUT

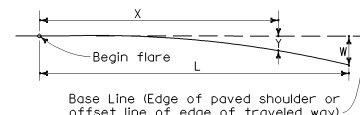
(GUARD RAILING INSTALLATION AT STRUCTURE DEPARTURE WITH END ANCHOR ASSEMBLY AT TRAILING END OF RAILING)  
See Notes 7 and 10

### NOTES

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard rail post spacing to be 1905 mm center to center, except as otherwise noted.
- Except as noted, line posts are 150 mm x 200 mm x 1.83 m wood with 150 mm x 200 mm x 360 mm wood blocks. MW 150 x 14 steel posts, 1.83 m in length, with 150 mm x 200 mm x 360 mm notched wood blocks or plastic blocks may be used for 150 mm x 200 mm x 1.83 wood posts with 150 mm x 200 mm x 360 mm wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by  $\rightarrow$ .
- For Transition Railing (Type WB) details for Type 12C Layout, see Standard Plan A77J4.
- For details of End Anchor Assembly (Type SFT) used with Type 12DD Layout, see Standard Plan A77H1.
- Type 12DD layout is typically used to the right of traffic departing a structure on two-way conventional highways where the roadbed width across the structure is equal to or greater than 12 meters and guard railing is recommended (embankment height, side slopes, other fixed objects). See Railing Case 3 in Diagram No. 2 on Standard Plan A77D1. Length of railing to be equal to multiples of 3.8 meters. For guard railing connection details to bridge rail, see Standard Plans A77J1 and A77K1. For guard railing connection details to wall, see Standard Plan A77J3.
- The 15:1 or flatter flare for Type 12CC Layout is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of guard railing within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 3.8 meters.
- For details of the buried post end anchor used with Type 12CC Layout, see Standard Plan A77I2.
- Where placement of dike is required with guard railing installations, see Standard Plan A77C4 for dike positioning details.
- Type 12CC Layout is typically used to the right of traffic departing a structure on two-way conventional highways where the roadbed width across the structure is less than 12 meters. See Railing Case 2 in Diagram No. 1 on Standard Plan A77D1.
- For additional details of a typical connection to bridge rail for Layout Type 12CC, see Connection Detail CC on Standard Plan A77J2 and Connection Detail HH on Standard Plan A77K2.
- For additional details of a typical connection to bridge rail for Layout Type 12DD, see Connection Detail BB on Standard Plan A77J1 and Connection Detail GG on Standard Plan A77K1.
- For typical flare offsets for 7.6 m length parabola with maximum offset of 305 mm, see Standard Plan A77E1.

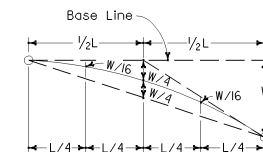


DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET TOTAL SHEETS
 REGISTERED CIVIL ENGINEER July 1, 2004 PLANS APPROVAL DATE The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet. To get to the Caltrans web site, go to: <a href="http://www.dot.ca.gov">http://www.dot.ca.gov</a>				



Y = Offset from base line  
W = Maximum offset  
X = Distance along base line  
L = Length of flare

### PARABOLIC FLARE OFFSETS



### TYPICAL PARABOLIC LAYOUT

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

## METAL BEAM GUARD RAILING TYPICAL LAYOUTS FOR STRUCTURE DEPARTURE

NO SCALE

ALL DIMENSIONS ARE IN  
MILLIMETERS UNLESS OTHERWISE SHOWN

A77F5